

## PLASMA ION IMPLANTATION SYSTEM

### Abstract

5 A plasma ion implantation system comprises a vacuum chamber, a  
plasma generator configured to generate ions in the vacuum chamber, a sample  
holder inside the vacuum chamber, and a voltage source configured to provide a  
bias voltage between the sample holder and the vacuum chamber to attract ions  
to implant in a high-k dielectric layer of a sample positioned on the sample  
holder.

10